

ABSTRACT

This research presents theory and modeling process used in the manufacturing industry. The structure of the simulation process consists of observation and control of all system via the monitor display , system used to communicate between each equipment or machinery ,conveyor system through a process of manufacturing jobs in each production line and robot arm used to moving or packaging. The aim of this project is to study process and communication between systems. To make it work consistently in a systematic way. In this project, responsible section is the design and control robot arm system.

Procedure of process starts from designing and implementing the parts of the robot arm by using few pieces of acrylic. The structure of the robot's joints uses servo motor. Study and design keypad joystick circuit for control servo motors. Stamp 168 is used to control serial communication with RS232 to the computer PC via USB port. Then controlling program is written and burn onto stamp 168 board for experiment. The results show that the implemented system can control robot arm to move to the desired position with the acceptable error.